5440-00 Elementary Education

The holder is authorized to teach grades K-6.

In order to qualify for this endorsement, the candidate shall demonstrate that he/she meets the knowledge and performance standards for professional knowledge of elementary education as well as the knowledge and performance standards for the four major content areas of the elementary curriculum as follows:

Knowledge Standards – Professional Knowledge:

Demonstrates a thorough understanding of the developmental nature and needs of children ages 5-12, and of ways to structure the learning environment and organize, implement, and assess curriculum and instruction to maximize students' learning and development. Specifically, the educator understands:

The progression of typical early childhood through early adolescent growth and development within each domain (i.e., cognitive, linguistic, social, physical, and emotional), including the wide variation in how students learn and typically develop, and the variety of economic, social, and cultural influences which affect each student's life

The characteristics and signs of atypical development and the challenges these present to teaching and learning

How to work cooperatively and respectfully with all families to support students' learning and development

Ways to organize the learning environment in order to promote children's holistic development

Curricular design and instructional techniques that engage the unique intellectual and psychosocial nature and needs of elementary students, including embedded literacy strategies that promote the reading and writing skill development of all students across the content areas

Music, drama, and the visual arts as expressions of human emotion and culture; powerful forms of communication; and vehicles for enhancing learning opportunities across the curriculum

Performance Standards – Professional Knowledge:

Elementary educators draw upon their knowledge of child and early adolescent development and learning theory; the interests, needs, and backgrounds of their students; and their knowledge of subject matter, integrative curriculum, and assessment to design and implement developmentally appropriate learning experiences that enable students to explore challenging concepts and issues and develop essential foundational skills in purposeful and engaging ways. Specifically, the educator:

Uses proactive, collaborative strategies to promote parent-teacher and parent-child communication about student learning and development

Provides an appropriate learning environment that promotes the developmental needs of children in the areas of self-awareness and respect for self and others

Develops and implements curricula that explore themes and concepts that transcend the disciplines and/or grades, and that help students understand how the subjects they study can be used to explore issues in their lives and in the world around them

5440-00 Elementary Education (Cont'd)

Implements curriculum using a variety of instructional strategies to ensure that all students learn the central concepts in each content area, are engaged in active learning, and to promote individual development and social cooperation

Integrates the visual and performing arts within the curriculum and facilitates and encourages children's creative expression through a variety of media

Incorporates embedded literacy strategies throughout all instruction

Knowledge Standards – English Language Arts, Mathematics, History/Social Sciences, and Science:

English Language Arts

Demonstrates knowledge of research-based principles and processes underlying literacy development, and the components of effective literacy instruction, as delineated in current national professional standards[1] and reflected in *Vermont's Framework of Standards and Learning Opportunities*. Specifically, the educator understands and/or knows:

Development of Oral Language and Literacy – Processes, principles, and dimensions of oral language acquisition; the relationship between oral language development and literacy development; the development of emergent and early literacy; the impact of physical, emotional, and cultural factors on language development and acquisition of reading and writing; role of metacognition in language and literacy development; the elements of effective verbal and non-verbal communication

Literature and Media – A wide variety of quality, age-appropriate literature across genres, eras, cultures, and subcultures; literary elements and strategies for textual analysis

Language and Word Study – The purposes of language and approaches to analyzing language; the pronunciation of English phonemes and their graphemes; the developmental progression of phonological awareness; vocabulary development and its relationship to literacy acquisition; the developmental stages of spelling and morphological analysis

Reading Comprehension and Fluency – Reading as the process of constructing meaning from text; the components of fluency; factors that influence comprehension and fluency; typical elements and features of narrative and expository texts, including typical features of beginner texts, and how readers' awareness of these features supports comprehension; cognitive strategies and instructional approaches for supporting comprehension and fluency of beginning and developing readers

Written Expression – Writing as symbolic representation and the stages of early writing development, including drawing; the composing processes that writers use, and planning strategies most appropriate for particular kinds of writing; dimensions of quality writing and types of writing; the conventions of written English; uses of writing portfolios and benchmarks and standards for various age/grade levels

Assessment and Adaptation of Literacy Instruction – The importance of individualizing the literacy program to address the needs and strengths of learners; a variety of valid and efficient language arts assessments appropriate for different purposes; the observable characteristics of a variety of reading and writing difficulties; strategies for modifying literacy instruction to support the needs of individual learners, including English Language Learners (ELL's)

5440-00 Elementary Education (Cont'd)

Mathematics

Demonstrates knowledge of mathematical content, concepts, and skills delineated in current national professional standards[2] and in *Vermont's Framework of Standards and Learning Opportunities* including:

National Council of Teachers of Mathematics (NCTM) process skills as vehicles for acquiring and using mathematics content knowledge

Essential early numeracy concepts and their development, and typical misconceptions in mathematical reasoning held by early primary to early adolescent students

Specific content in the areas of number and operations; algebra and functions; geometry and measurement; and, data analysis, statistics, and probability, recommended for elementary and middle grades teachers in *The Mathematical Education of Teachers* (2001, Conference Board of the Mathematical Sciences)

History and the Social Sciences

Demonstrates knowledge of historical and social science content, concepts, and skills in the areas of development of students' historical thinking; history; cultural geography; diversity, unity, identity, and interdependence; and citizenship as delineated in current national professional standards[3] and in Vermont's Framework of Standards and Learning Opportunities.

Science

Demonstrates knowledge of scientific content, concepts, and skills in the areas of development of students' scientific thinking; the scientific inquiry process; life sciences; physical sciences; Earth, environmental, and atmospheric sciences; and living and non-living systems, as delineated in current national professional standards[4] and in *Vermont's Framework of Standards and Learning Opportunities*.

Performance Standards – English Language Arts:

Implements a language arts curriculum that fosters interest and growth in all aspects of oral and written literacy in order to provide students with the communication skills necessary to understand and influence their own lives and to learn about the world. Specifically, the educator:

Literacy Development through Literature and Media–

Uses a wide variety of fiction and non-fiction textual materials, including some of students' own selection, to increase students' motivation to read independently for information, pleasure and personal growth

Selects and reads quality literature aloud and applies tools of literary analysis to the facilitation of discussions of central themes and ideas within literature

Employs a range of instructional strategies to support emergent and early literacy

Uses active instructional strategies to promote various dimensions of oral language development, and to facilitate critical analysis and interpretation

5440-00 Elementary Education (Cont'd)

Teaches students to distinguish between fact, opinion, and interpretation, and how to analyze and judge the credibility of print and non-print communications

Implements strategies to include parents as partners in the literacy development of their children

Models and teaches the elements of effective verbal and non-verbal communication

Language and Word Study –

Uses a variety of explicit and interactive approaches to teach key aspects of word study such as phonemic awareness, print concepts, and decoding

Teaches students to use syntactic, semantic, and graphophonemic cues to identify and spell words

Employs effective instructional strategies for the development of a broad vocabulary

Reading Comprehension and Fluency –

Provides explicit instruction in how to flexibly use pre-, during, and post-reading cognitive strategies to understand, analyze, and interpret a variety of types of texts

Employs a range of instructional approaches to support comprehension across the content areas

Uses instructional strategies to build or strengthen fluency

Written Expression –

Provides multiple opportunities for beginning writers to learn and practice that print carries meaning (e.g., by demonstrating for children the connections between their illustrations and words), to use writing purposefully, and to explore sound-symbol relations

Organizes and implements a writing portfolio program that promotes high quality writing by including a variety of instructional strategies and topics to teach purposes, structures, and composition

Uses required writing rubrics and benchmarks for assessing student writing and teaches students to use these to analyze their own writing

Models and teaches appropriate grammar, usage, and mechanics

Implements strategies to build fluency, accuracy, and automaticity in handwriting to support composition

Assessment and Adaptation of Literacy Instruction –

Uses a variety of valid assessment strategies (including records of oral reading) to regularly evaluate students' progress in all of the individual dimensions of literacy development

Uses the results of literacy assessments to adjust and/or target instruction, to flexibly group students, when needed, and to appropriately match students with reading material

5440-00 Elementary Education (Cont'd)

Performance Standards – Mathematics, History and the Social Sciences, and Science:

Implements mathematics, history/social sciences, and science curricula that integrate skills and content and enable conceptual development and development of the habits of mind that support inquiry within each discipline. Specifically, the educator:

Mathematics

Anticipates, elicits, and corrects typical misconceptions in mathematical reasoning

Models the habits of mind of flexibility and perseverance that support mathematical learning

Employs a range of instructional activities and resource materials to support the development of early numeracy concepts, and to reveal the application of mathematics to everyday life

Designs and incorporates mathematical tasks/activities that capitalize upon children's intuitive insights and language and that enable students to investigate, explore, and discover structures and relationships; create and use mathematical models; apply informal strategies to solve mathematical problems; formulate and solve problems individually and collaboratively; and justify and communicate their conclusions orally and in writing

Communicates mathematical ideas using appropriate mathematical language and representations, and teaches students to use both to communicate about mathematical ideas

Uses required mathematics scoring guides and benchmarks to evaluate student work and teaches students to use both to evaluate their own work

Integrates appropriate manipulatives and technological tools to facilitate mathematical problem solving and communication

History and the Social Sciences

Models how historians, geographers, and other social scientists view, analyze, and interpret the world

Incorporates activities that enable children to make connections between themselves and the larger world, including sharing and experiencing different cultures and traditions, and exploring the relationship between people and their environments

Designs and implements activities that use children's own stories as a way to introduce the chronological thinking essential to historical thinking

Provides opportunities for students to examine and interpret historical and contemporary events and issues through active learning strategies such as research, role-play, debate, and discussion

Provides opportunities for students to participate in community-based investigations and service projects, and to access and use local historical resources

Creates or adopts instructional and assessment tasks that teach students to analyze and interpret primary and secondary sources, identify webs of cause and effect, and differentiate between fact, opinion, and interpretation

5440-00 Elementary Education (Cont'd)

Provides opportunities for students to use historical, geographical, and social science research methods, tools, and technologies

Science

Anticipates and elicits the naïve scientific ideas, emerging concepts, and/or misconceptions that students are likely to have prior to instruction

Models the skills and habits of mind inherent in scientific inquiry

Provides opportunities for students to raise questions, become aware of the scientific nature of their questions, and to investigate their questions using the scientific method

Designs a variety of activities that allow students to build on their own intuitive explanations of how things work as they acquire more sophisticated scientific understandings

Creates opportunities for students to collaboratively design and implement scientific investigations, and to present and discuss the results of their investigations

Conducts investigations according to safe scientific procedures

Integrates mathematical, scientific, and technological tools appropriate to students' ages and abilities in order to facilitate scientific inquiry

Conveys to students how the development of scientific and mathematical theory and understanding is a historical process with continuous creation of new knowledge and refinement or rejection of "old" knowledge

Demonstrates sensitivity to inequities in science and mathematics teaching and careers by incorporating specific instructional strategies that promote equity

Additional Requirements:

A minimum of a practicum, or the equivalent, in elementary education at both the primary (K-3) and upper elementary (4-6) instructional levels is required.

---

[1] **e.g., *Standards for Reading Professionals* (International Reading Association, 1998); *Every Child Reading: A Professional Development Guide* (Learning First Alliance, 2000); *Standards for the English Language Arts* (International Reading Association/National Council of Teachers of English, 1996)**

[2] **e.g. *The Mathematical Education of Teachers* (Conference Board of the Mathematical Sciences, 2001), *Principles and Standards for School Mathematics* (National Council of Teachers of Mathematics, 2000)**

[3] **e.g., *National Standards for History (*National Center for History in the Schools, 1996*), Curriculum Standards for Social Studies (*National Council for the Social Studies, 1994*), Geography for Life (*National Geographic Research & Exploration, 1994)**

[4] **e.g. *National Science Education Standards* (National Academy of Sciences, 1996), *Benchmarks for Science Literacy* (Oxford University Press, 1993)**